Item No. 15

August 13, 2004

ERRATA SHEET

CHANGES TO ORDER NO. R8-2204-0063

Changes to Waste Discharge Requirements

Page 2, Finding 8, delete paragraph regarding hydrologic data and renumber subsequent provisions accordingly.

Page 3, Finding 12, line 5, change text
"prevent" to "respond to"

Page 3, Finding 12, line 6, change text
"…stations release from impacting …" to "…stations to impact…"

Page 4, Finding18, line 2, insert text
… requires soil vapor and groundwater monitoring …

Page 4, Finding 18, line 6, change text
"The Order…" to " The contingency plan … "

Page 4, Finding18, line 8, delete sentence
"The requirement contained herein are the same as those currently implemented voluntarily by other gas stations operating near the desalter extraction wells."

Page 4, Finding 22, line 3, change text
"…will…" to "…should…"

Page 6, Provision 4, before Provision 4,
insert new Provision 4 and re-number subsequent provisions accordingly:

"The discharger shall establish a groundwater monitoring well network to adequately monitor any potential impact to the underlying groundwater from releases of petroleum fuel hydrocarbons from the underground storage tank and dispenser system. The groundwater monitoring wells shall be located and constructed so that representative samples of the discharge to groundwater can be obtained. The groundwater monitoring well network shall be in place prior to the initial receipt of fuel at the station.

Page 6, Provision 4,before Provision 4,
insert new Provision 5 and re-number subsequent provisions accordingly:

"The discharger shall establish a soil vapor monitoring and extraction system to monitor and extract (M & E) any vapor from releases of petroleum hydrocarbons from the underground storage tank and dispenser system. The soil vapor M & E network shall be located and constructed so that the soils along the entire length of the fuel distribution system can be monitored for vapor releases. The soil vapor M & E system is to be installed and maintained in good working order to remain in compliance with the waste discharge requirements and the Monitoring and Reporting Program deadlines. Failure to install and monitor the soil vapor M & E system and provide appropriate reports is a violation of the Monitoring and Reporting Program.

Page 6, Provision 4, shorten sentence
" …Officer (see Provisions B.15., below) . ~~when the results ….~~

Page 6, Provision 4, delete table of concentrations

Page 6, Provision 5, insert text and delete text
"Determination of the groundwater concentrations ~~of the constituents identified in the table in Provisions B.4., above~~ shall be based…

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Page 6, Provision 6, delete paragraph

Page 7, Provision 7, delete paragraph

Page 7, Provision 8, modify text
"… monthly concentration of the constituents of concern ~~listed in the table in Provision B.4.~~ and …

Page 8, Provision 15, line 3, replace text
~~"The site contingency (spill … …listed in Provisions B.4. have been exceeded)."~~ with "Prior to approval of such plan, the Executive Officer shall consult with SAWPA and Western Municipal Water District concerning the content of the contingency plan."

Page 8, Provision 15, line 9, modify text
"~~In addition,~~ The plan shall specify additional site assessment, soil vapor and groundwater …"

Changes to the Monitoring and Reporting Program

Page 1, heading,
Change R8-2002-0033 to R8-2002-0063

Change Title from "Waste Discharge Requirements …" to "Monitoring Requirements …"

Page 1, A.3, line 5 change text
"…, the Regional Board, at their discretion, …" to "…, the Executive Officer …"

Page 2, A.6, line 3 insert sentence at end of paragraph
"Soil vapor samples shall be collected from the soil vapor M & E system using standard soil vapor sampling methodologies and protocols."

Page 3, B.1, line 1, change text
"A groundwater monitoring well network shall be established…" to " The discharger shall establish a groundwater well network."

Page 3, B.2, line 1, change text
"A more frequent groundwater sampling schedule shall be implemented…" to "The discharger shall implement a more frequent groundwater sampling schedule…"

Page 3, after Section B
insert new Section C and re-designate Section C to Section D

C. SOIL VAPOR MONITORING

1. The discharger shall establish a soil vapor monitoring and extraction system (M & E) to adequately monitor the soils beneath the fuel distribution network for releases. The soil vapor M & E system shall be located and constructed to monitor the soil under the entire length of the fuel distribution network. The following table shall constitute the soil vapor monitoring program:

Constituent	Type of Sample	Minimum Frequency of Sampling
Total Petroleum Hydrocarbons	Grab or instrument reading	Weekly

2. The discharge shall implement a more frequent soil vapor sampling schedule, as specified in the site contingency plan.

Page 3, C.1, line 1 change text
"The results of the above analyses shall be reported…" to "The discharger shall report the results of the above analyses…"

Page 4, C.2, line 1 change text
"Monitoring Reports shall be submitted …" to "The discharger shall submit the Monitoring reports…"

California Regional Water Quality Control Board
Santa Ana Region

August 13, 2004

Staff Report

ITEM: 15

SUBJECT: Waste Discharge Requirements for Lillo Service Station, City of Riverside, Riverside County- Order No. R8-2004-0063

Mr. Elias Atallah owns and intends to operate a currently inactive, independent Texaco-branded gasoline service station (designated as Lillo Service Station) in the City of Riverside in Riverside County. The subject site is located hydraulically upgradient of wells that supply water to the Arlington Desalter, operated by the Santa Ana Watershed Project Authority (SAWPA). The high likelihood of releases of gasoline from the underground storage tanks at the proposed Lillo Service Station poses a threat to the operation of the Arlington Desalter. Given the unusually high vulnerability of the Arlington Desalter wells to nearby releases of pollutants, such as are highly likely to occur with the operation of the Lillo gasoline service station, it is essential to monitor the groundwater underlying the Lillo Service Station and to develop a contingency plan for responses in the event of releases. The Regional Board does not intend to issue waste discharge requirements to all gasoline service station owners/operators within the Region. However, the site-specific conditions at the Lillo Texaco location make it necessary to require the groundwater monitoring and the site contingency plan in order to prevent an impact to the Desalter extraction wells.

Board staff discussed with Mr. Atallah the need for additional monitoring and the development of a site contingency plan in light of the proximity of the facility to the Desalter extraction wells. Such additional monitoring is being conducted and site contingency plans have been developed voluntarily by the owner/operators of existing gasoline service stations operating near the Desalter well sites. Initially, Mr. Atallah did not agree to participate voluntarily in the required monitoring or to prepare a contingency plan. Therefore, Board staff drafted waste discharge requirements (WDRs) for the proposed facility to require monitoring for releases from the site to the groundwater and to require that a site contingency plan (spill release plan) be developed to respond to and remediate any releases from the site. The requirements for monitoring and development of a site contingency plan are the same as those imposed on neighboring service stations and are intended to prevent adverse impacts on the operation of the Arlington Desalter. On July 22, 2004, Mr. Atallah's consultant delivered to the Regional Board office a Contingency Plan which includes a Monitoring Program along with a cover letter stating his intent to comply with the provisions of waste discharge requirements.

BACKGROUND

The proposed facility is an inactive Texaco-branded service station located at the northeastern corner of the intersection of Magnolia Avenue and La Sierra Avenue in Riverside. Petroleum hydrocarbons were detected at the site during the removal of underground storage tanks (USTs) at the site in 1985 and 1986. Subsequent investigations conducted at the site between 1985 and 1997 included the installation of eleven groundwater-monitoring wells. In January 1997, Board staff determined that "no further action" was required to remediate the subject site. Shell Oil acquired

the Texaco station as part of their merger with Texaco Oil Company. In January 2002, Shell Oil conducted an additional subsurface investigation as part of a site divestment investigation. Five groundwater-monitoring wells were installed in March 2003. The USTs at the site were reportedly removed in May 2003. Shell Oil is currently conducting monthly and quarterly groundwater sampling at the site.

The site overlies the Arlington Groundwater Subbasin. The Basin Plan identifies the existing and potential beneficial uses of the Arlington Groundwater Subbasin to include municipal and domestic supply. Water quality in much of the Arlington Groundwater Subbasin is characterized by high total dissolved solids (TDS) and nitrate concentrations that exceed 1,000 milligrams per liter (mg/l) and 45 mg/l, respectively. Poor water quality conditions have been attributed to extensive agricultural activity in the basin.

In 1990, SAWPA began the operation of the Arlington Desalter, which extracts and treats groundwater to remove salts, including nitrate, from the Arlington Groundwater Subbasin. The extracted water is treated using reverse osmosis technology (RO). The RO treatment system is not designed to treat petroleum hydrocarbons or other gasoline related compounds. There are five extraction wells located southwest (hydraulically downgradient) of the intersection of Magnolia Avenue and La Sierra Avenue. Extraction Well #5 is the closest well to the proposed Lillo gasoline service station site and is located less than 1000 feet downgradient from the intersection of Magnolia Avenue and La Sierra Avenue. In May 2003, SAWPA began upgrading the desalter well system to enable the system to produce and distribute groundwater to the City of Norco for domestic use. SAWPA is under contact to deliver 5400 acre-feet of potable drinking water to the City of Norco as well as water to the Orange County Water District for recharge to their groundwater basin.

The Arlington Basin primarily consists of interbedded silts, clays, fine to coarse sands, and gravels. Prior to desalter operations, depth to groundwater in the vicinity of the desalter site typically ranged from 15 to 20 feet below ground surface (bgs). Operation of the desalter has resulted in groundwater elevation decline to an approximate depth of 40 feet bgs. The desalter wells extract groundwater from approximately 80 to 140 feet bgs. Groundwater in the vicinity of the site flows to the southwest. Groundwater pump tests conducted in 1989 yielded a specific capacity estimate of 67.6 gallons per minute per foot (gpm/ft), with transmissivity estimated to be approximately 500,000 gallons/day/foot (67,000 square feet/day). Based on the testing, Shell's hydrologic consultant estimated that the groundwater seepage velocity between the desalter extraction well #5 and the service station in this highly permeable aquifer is on the order of 24 to 30 feet/day. This is a very high groundwater seepage velocity. Shell also contended that the actual velocity might be less due to an increase in finer grained (lower permeability) materials in the shallower portion of the aquifer. Given the highly transmissive nature of the underlying aquifer, the shallow depths to groundwater, and the shallow depths of the groundwater extraction wells, the Arlington Desalter wells are highly vulnerable to nearby releases of pollutants. If the desalter well #5 becomes impacted from releases of petroleum hydrocarbons from the proposed Lillo gasoline service station, the well would have to be shut down or operated at a reduced extraction level. Moreover, complex and expensive cleanup would have to be initiated and funded.

In recent years, studies conducted by the U. S. EPA, the State Water Resources Control Board, and the Santa Clara Valley Water District have provided strong evidence that hydrocarbon

releases have occurred from new and upgraded underground storage tank (UST) systems. In 1999, the California State Water Resource Control Board, in a report titled 'Leak History of New and Upgraded UST Systems', reported that there is evidence of releases from new and upgraded UST systems, apparently resulting from improper installation, operation, or maintenance. Several components, such as underground dispenser piping, pipe fittings and turbine sumps, were found to be the source of a disproportionate number of releases. Additionally, there is evidence that leak detection programs may not be performing as intended. The report noted that only 4.5 percent of the releases in the LUSTIS database and only 0.7 percent of those in the inspection database were discovered by the UST system leak detection activities. The U. S. EPA, in reporting the results of the Blue Ribbon Panel on Oxygenates in Gasoline, concluded that releases continued to be reported from 1998-compliant UST systems due to problems associated with improper design, construction, and operation and maintenance In research performed by Santa Clara Valley Water District, MtBE was detected in the groundwater beneath 67% of the 28 sites examined, which were compliant with the 1998 upgrade requirements. The UST staff at SCVWD concluded that operating gasoline UST facilities posed a threat to water resources and recommended that groundwater monitoring be required at all operating gasoline UST facilities operating in sensitive groundwater basins. While these systems are constantly being improved, the above-referenced studies demonstrate that there is a high likelihood of leaks. The operation of gasoline station USTs near public water supply wells in a shallow, highly transmissive and permeable aquifer is a unique situation requiring the exercise of special measures to prevent contamination of already-scarce sources of water supply.

Regional Board and SAWPA staff have also identified three other service stations within 1000 feet of the extraction wells. A Shell Oil service station was located at the corner of the intersection of Magnolia Avenue and La Sierra Avenue opposite from the former Texaco-branded station (the site of the proposed Lillo service station). The Texaco-branded station and the Shell Oil Station ceased operating in 2003 and 2004, respectively. The two remaining operating stations are ARCO and Mobil service stations, located at opposite corners of the intersection of Magnolia Avenue and Pierce Street. Beginning in 2002, Board staff has been meeting regularly with SAWPA staff and representatives from Shell Oil Products US, ExxonMobil, and ARCO. Regional Board staff have required that the owners/operators of operating gasoline service stations in the near vicinity of the Arlington Desalter wellfield conduct additional groundwater investigations and routine groundwater monitoring. In addition, these parties were required to develop site contingency plans (spill response plan) to prevent any future releases from the gasoline service stations from impacting the Arlington desalter wells. The groundwater monitoring and site contingency plans were necessary because the reported high groundwater velocity makes it critical to detect releases to the groundwater rapidly and to mitigate those releases promptly, before the desalter wells become impacted from those releases. These requirements are more stringent that those normally required for typical gasoline service stations due to the high vulnerability of the Arlington Desalter wells to releases from the nearby sites. Shell Oil Products, ExxonMobil and Arco are currently conducting the requested monitoring and have submitted a contingency plan without need to issue waste discharge requirements to them. Based on Shell Oil's evaluation of the potential risks to the desalter wells from potential releases from their station located across the street from the proposed Lillo service station, Shell Oil decided to cease operations at that location

Currently, there are five existing groundwater monitoring wells (MW-1 – MW-5) located at the proposed facility site that have been sampled quarterly since March 2003. Wells MW-2 and MW-3

have been sampled monthly since September 2003. MTBE was initially detected in MW-3 at a maximum concentration of 340 ug/l and has since decreased in concentration. MTBE has not been detected in any existing on-site monitoring wells since December 2003. The concentrations of TPH, BTEX compounds and all fuel oxygenates have been either non-detect or below their respective maximum contaminant levels (MCLs) since September 2003.

Beginning in June 2004, Board and SAWPA staff met twice with Mr. Atallah regarding his intended operation of the former Texaco service station. Mr. Atallah was informed that he would be required to develop a site contingency plan and to conduct groundwater monitoring comparable to that currently being conducted by the owners/operators of existing gasoline service stations operating near the Desalter well sites. Since there is the high likelihood for hydrocarbon releases from Mr. Atallah's proposed UST system, it is appropriate to require that the quality of the groundwater beneath this system be monitored, in addition to the required tank monitoring. The purpose of the monitoring is to detect and respond to releases rapidly, and assess the magnitude of releases. Initially, Mr. Atallah did not agree to participate voluntarily in the required monitoring or to prepare a contingency plan, making the issuance of these requirements necessary. On July 22, 2004, Mr. Atallah's consultant delivered to the Regional Board office a Contingency Plan which includes a Monitoring Program along with a cover letter stating his intent to comply with the provisions of waste discharge requirements.

This Order prohibits the discharge of petroleum hydrocarbon compounds from the facility to the ground. Monitoring and Reporting Program R8-2004-0063 specifies the routine groundwater monitoring that is to be conducted to determine whether any such discharges have occurred. The Order requires the discharger to submit for approval by the Executive Officer a site contingency (spill response and cleanup) plan prior to the receipt of fuel at the site. The site contingency plan is to include a proposal for enhanced monitoring, site assessment and remedial action. This Order requires the discharger to implement the approved site contingency plan when monitoring results for constituents of concern exceed the average monthly constituent concentration values for benzene, toluene, ethylbenzene xylene, methyl tert-butyl ether (MTBE), and tert-butyl alcohol (TBA) that are identified in the Order. These average monthly constituent concentration values are based on the California Department of Health Services' Action Levels or drinking water Maximum Contaminant Levels.

Compliance by the discharger with the proposed Order and implementation of the contingency plan should be adequate to protect the beneficial uses of the waters in the area.

RECOMMENDATION:

Adopt Order No. R8-2004-0063 as presented.

Comments were solicited from the following:

State Water Resources Control Board, Office of the Chief Counsel – Jorge Leon
State Water Resources Control Board, Division of Water Quality – James Maughan
State Water Resources Control Board, Division of Water Quality – Kevin Graves
Santa Ana Watershed Project Authority - Eldon Horst
Hargis and Associates - Roger Niemeyer

California Regional Water Quality Control Board
Santa Ana Region

ORDER NO. R8-2004-0063

Waste Discharge Requirements
For

Lillo Service Station
11095 Magnolia Avenue, Riverside
Riverside County

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board), finds that:

1. Mr. Elias Atallah (hereinafter, Discharger) owns and intends to operate a currently inactive, Texaco-branded service station located at the northeastern corner of the intersection of Magnolia Avenue and La Sierra Avenue in the City of Riverside, Riverside County. The site is located at longitude 177°28"38" and latitude 33°54'14". The proposed facility will be an independent gasoline service station designated as Lillo Service Station.

2. In a June 10, 2004 letter, Board staff informed Mr. Atallah that waste discharge requirements (WDRs) would be drafted for his proposed gasoline service station. A report of waste discharge was not submitted for this facility, therefore, this Order is issued pursuant to California Water Code Section 13263(d).

3. The proposed facility is located upgradient of the wells that supply water to the Arlington Desalter Facility operated by the Santa Ana Watershed Project Authority (SAWPA).

4. The Arlington Desalter Facility began operation in 1990 by extracting and treating groundwater to remove salts, including nitrate, from the Arlington Groundwater Subbasin. The treated groundwater was discharged to the Santa Ana River for distribution to the Orange County Water District's (OCWD) groundwater recharge basins.

5. In May 2003, SAWPA began upgrading the Arlington Desalter well system to enable the system to produce and distribute treated groundwater to the City of Norco for domestic use. SAWPA is under contact to deliver 5400 acre-feet of potable drinking water to the City of Norco, as well as water to the OCWD for recharge to their groundwater basins.

6. The Arlington Desalter extracts groundwater from five extraction wells located southwest (hydraulically downgradient) of the proposed facility. Extraction Well #5 is the closest well and is less than 1000 feet from the proposed facility.

7. The Desalter extraction wells extract groundwater from a shallow (approximately 80 to 140 feet below ground surface), highly permeable and transmissive aquifer within mainly interbedded silts, clays, fine to coarse sands, and gravels.

8. Groundwater pump tests conducted in 1989 yielded a specific capacity estimate of 67.6 gallons per minute per foot (gpm/ft), with transmissivity estimated to be approximately 500,000 gallons/day/foot (67,000 square feet/day). Based on the test, a groundwater seepage velocity in this highly permeable aquifer was estimated to be on the order of 24 to 30 feet/day between Desalter extraction well #5 and the proposed facility. This is a very high groundwater seepage velocity.

9. Given the highly transmissive nature of the underlying aquifer, the shallow depths to groundwater, and the shallow depths of the groundwater extraction wells, the Arlington Desalter wells are highly vulnerable to nearby releases of pollutants.

10. Regional Board and SAWPA staff have identified four service stations, including the former Texaco-branded station, within 1000 feet of the extraction wells. The Texaco-branded station (the site of the proposed facility) and an adjacent Shell Oil service station were located at opposite corners of the intersection of Magnolia Avenue and La Sierra Avenue. Shell Oil acquired the Texaco-branded station as part of its merger with Texaco Oil Company. The Texaco-branded station and the Shell Oil Station ceased operating in 2003 and 2004, respectively. The two remaining operating stations are Arco and Mobil service stations located at opposite corners of the intersection of Magnolia Avenue and Pierce Street.

11. In recent years, studies conducted by the U. S. EPA, the State Water Resources Control Board, and the Santa Clara Valley Water District have provided strong evidence that hydrocarbon releases have occurred from new and upgraded underground storage tank (UST) systems. In 1999, the California State Water Resource Control Board, in a report titled 'Leak History of New and Upgraded UST Systems', reported that there is evidence of releases from new and upgraded UST systems, apparently resulting from improper installation, operation, or maintenance. Several components, such as underground dispenser piping, pipe fittings and turbine sumps were found to be the source of a disproportionate number of releases. Additionally, there is evidence that leak detection programs may not be performing as intended. The report noted that only 4.5 percent of the releases in the LUSTIS database and only 0.7 percent of those in the inspection database were discovered by the UST system leak detection activities. The U. S. EPA, in reporting the results of the Blue Ribbon Panel on Oxygenates in Gasoline, concluded that releases continued to be reported from 1998-compliant UST systems due to problems associated with improper design, construction, and operation and maintenance. In research performed by Santa Clara Valley Water District, MtBE was detected in the groundwater beneath 67% of the 28 sites examined, which were compliant with the 1998 upgrade requirements. The UST staff at SCVWD concluded that operating gasoline UST facilities posed a threat to water resources and recommended that groundwater monitoring be required at all gasoline UST facilities operating in sensitive groundwater basins. While these systems are constantly being improved, the above-referenced studies demonstrate that there is still a high likelihood of leaks. The operation of gasoline station USTs near public water supply wells in a shallow, highly transmissive and permeable aquifer is a unique situation requiring the exercise of special measures to prevent contamination of already-scarce sources of water supply.

12. Beginning in 2002, Board staff met with SAWPA staff and representatives from Shell Oil Products US, ExxonMobil, and Arco to require that additional groundwater monitoring and investigation be conducted at their operating gasoline service stations near the Arlington Desalter Facility well sites. In addition, these parties were required to develop site contingency plans (spill response plans) to prevent any releases from the gasoline service stations releases from impacting the Arlington Desalter wells. These requirements are more stringent than those normally required for typical gasoline service stations and are intended to protect the highly vulnerable Arlington Desalter wells in the event of releases from these nearby gasoline service stations. Due to the reported high groundwater velocity, it is critical that accelerated groundwater sampling and site contingency plans be implemented to detect releases to the groundwater rapidly and to mitigate those releases promptly, in order to prevent adverse impact on the Desalter wells. If impacted by hydrocarbon releases, the municipal use of the public supply water from the Desalter wells would have to be reduced or completely stopped. Moreover, complex and expensive cleanup would have to be initiated and funded.

13. Shell Oil Products, ExxonMobil and ARCO are currently conducting the requested monitoring and have submitted a contingency plan without the need to issue individual WDRs to them.

14. Beginning in June 2004, Board and SAWPA staff met twice with Mr. Atallah regarding his intended operation of the former Texaco service station. Mr. Atallah was informed that he would be required to develop a site contingency plan and to conduct groundwater monitoring comparable to that currently being conducted by the owners/operators of existing gasoline service stations operating near the Desalter well sites. Since there is the high likelihood for hydrocarbon releases from Mr. Atallah's proposed UST system, it is appropriate to require that the quality of the groundwater beneath this system be monitored, in addition to the required tank monitoring. The purpose of the monitoring is to detect and respond to releases rapidly, and assess the magnitude of releases. Initially, Mr. Atallah did not agree to participate voluntarily in the required monitoring or to prepare a contingency plan, making the issuance of these requirements necessary. On July 22, 2004, Mr. Atallah's consultant delivered to the Regional Board office a Contingency Plan which includes a Monitoring Program along with a cover letter stating his intent to comply with the provisions of waste discharge requirements.

15. Currently, there are five existing groundwater monitoring wells (MW-1 – MW-5) located at the proposed facility that have been sampled quarterly since March 2003. Wells MW-2 and MW-3 have been sampled monthly since September 2003. MTBE was initially detected in MW-3 at a maximum concentration of 340 ug/l and has since decreased in concentration. MTBE has not been detected in any existing on-site monitoring wells since December 2003. The concentrations of TPH, BTEX compounds and all fuel oxygenates have been either non-detect or below their respective maximum contaminant levels (MCLs) since September 2003.

16. The underground storage tank (UST) regulations only require gasoline service station operators to conduct tank integrity monitoring and do not require groundwater monitoring and site contingency plans for dealing with potential releases of petroleum hydrocarbon compounds. However, the proposed operation of the facility poses a threat to the nearby Arlington Desalter wells. To assure that operation of the proposed Lillo facility is effectively controlled and monitored so as to prevent adverse impacts on groundwater quality and public water supplies, issuance of waste discharge requirements for the proposed facility is necessary.

17. The Regional Board does not intend to issue waste discharge requirements to all gasoline service station owners/operators within the Region. The issuance of waste discharge requirements for the Lillo service station is necessary and appropriate in light of the unusually high vulnerability of the Arlington Desalter wells to releases of pollutants, such as are highly likely to occur with the operation of the Lillo gasoline service station.

18. This Order prohibits the discharge of petroleum hydrocarbon compounds into the ground from the proposed facility. This Order requires groundwater monitoring to determine whether discharges from the UST and dispenser system to the underlying groundwater have occurred, and the implementation of a site contingency plan approved by the Executive Officer to insure that any such discharges are mitigated to prevent impacts to the Desalter well system. This Order defines the magnitude and conditions when a response to mitigate groundwater quality impacts is warranted. The site contingency plan is to be approved prior to receipt of fuel product in the onsite USTs. The requirements contained herein are the same as those currently implemented voluntarily by other gas stations operating near the Desalter extraction wells.

19. A Water Quality Control Plan (Basin Plan) became effective on January 24, 1995. The Basin Plan contains beneficial uses and water quality objectives for waters in the Santa Ana Region.

20. The beneficial uses of the Arlington Groundwater Subbasin include:

    a. Municipal and Domestic Supply,
    b. Agricultural Supply,
    c. Industrial Process Supply, and
    d. Industrial Service Supply.

21. The requirements contained in this Order are necessary to implement the Basin Plan.

22. The quality and characteristics of the potential discharges and the impacts of the potential discharges on the affected receiving waters have been carefully considered. If conducted in accordance with the terms and conditions of this Order, the site operations will not result in adverse impacts to the beneficial uses of the affected receiving waters.

23. In compliance with the California Environmental Quality Act (CEQA, Public Resources Code Section 21000 et seq.), the City of Riverside Planning Commission adopted a

Mitigated Negative Declaration for the facility on June 3, 2004. An updated CEQA document is expected to be certified by the City of Riverside in the near future.

24. The Regional Board has notified interested agencies and persons of its intent to issue waste discharge requirements for this facility and has provided them with an opportunity to submit their written views and recommendations.

25. The Regional Board, in a public meeting, heard and considered all comments pertaining to this Order.

IT IS HEREBY ORDERED that the discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. PROHIBITIONS

1. The discharge of petroleum hydrocarbon compounds from the facility to the ground is prohibited.

2. The discharge of petroleum hydrocarbon compounds that may affect the beneficial uses of the groundwater is prohibited.

3. The discharge of petroleum hydrocarbon compounds to property not owned or controlled by the discharger is prohibited.

4. The discharge of any substances in concentrations toxic to human, animal, plant or aquatic life is prohibited.

B. PROVISIONS

1. Neither the treatment nor the discharge of waste shall create, or threaten to create, a nuisance or pollution as defined by Section 13050 of the California Water Code.

2. This Order becomes effective upon certification by the City of Riverside of the California Environmental Quality Act documentation for the proposed Lillo Service Station.

3. The discharger shall comply with Monitoring and Reporting Program No. R8-2004-0063 issued by the Executive Officer. The MRP shall be in effect starting with the first month after receipt of fuel product in the onsite USTs. This monitoring and reporting program may be modified by the Executive Officer at any time during the term of this Order, and may include a reduction or an increase in the number of parameters to be monitored, the frequency of the monitoring or the number and size of samples to be collected. Any such

modifications may be returned back to the levels specified in the original monitoring and reporting program at the discretion of the Executive Officer.

4. The discharger shall implement the site contingency plan approved by the Executive Officer (see Provisions B.15., below) when the results of groundwater monitoring conducted pursuant to M&RP No. R8-2004-0063, B.1. demonstrate that the average monthly concentration of one or more of the constituents listed in the following table exceeds the specified average monthly concentration (as provided in Provisions B.5. through B.8., below).

Constituent	Average Monthly Concentration (µg/l)
Total Petroleum Hydrocarbons	100
Benzene	1.0
Toluene	10.0
Ethylbenzene	10.0
Xylene	10.0
Methyl Tertiary Butyl Ether (MTBE)	13.0
Tert Butyl Alcohol (TBA)	12.0

5. Determination of the concentrations of the constituents identified in the table in Provisions B.4., above, shall be based on the minimum levels/reporting level specified in Attachment "A" of M&RP No. R8-2004-0063 or on the lower detection limits achieved by the discharger.

6. Determination of the average monthly concentrations of the constituents identified in the table in Provisions B.4., above, shall be based on available analyses for the month. Where only one sample analysis is available in a month, that sample shall serve to characterize the discharge for the entire month.

7. If the constituent concentration in the monitoring sample is greater than the average monthly concentration specified in the table in Provisions B.4., above, or if the constituent concentration is greater than or equal to the reported minimum level when the specified average monthly concentration is below the minimum level, the discharger shall implement the site contingency plan as required by Provisions B.4., above.

8. When determining the average monthly concentration of the constituents listed in the table in Provisions B.4. and more than one sample result is available in a month, the discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

a. The data set shall be ranked from low to high, reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

9. The discharger must comply with all of the requirements of this Order. Any violation of this Order constitutes a violation of the California Water Code and may constitute a violation of the CWA and its regulations, and is grounds for enforcement action, termination of this Order, revocation and reissuance of this Order, denial of an application for reissuance of this Order; or a combination thereof.

10. The discharger shall take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.

11. The discharger shall take all reasonable steps to minimize any adverse impact to receiving waters resulting from noncompliance with any requirements specified in this Order, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncom plying discharge.

12. The discharger shall maintain a copy of this Order at the site so that it is available to site operating personnel at all times. Key operating personnel shall be familiar with its content.

13. The discharger shall notify the Regional Board in advance of any planned physical alterations or additions to the permitted facility or changes in operation including any material change or proposed change in the character, location or volume of the discharge or activity that may result in noncompliance with these waste discharge requirements.

14. The discharger shall, at all times, properly operate and maintain all facilities and systems, and related appurtenances that are installed or used by the discharger to achieve compliance with this Order. Proper operation and maintenance includes adequate laboratory controls, appropriate quality assurance procedures, effective performance, adequate funding, adequate staffing and training, and adequate process controls. This provision requires the operation of back up or auxiliary facilities or similar systems that are installed by a discharger only when the operation is necessary to achieve compliance with the requirements of this Order.

15. Prior to receipt of fuel product in the onsite USTs, the discharger shall submit a proposed contingency (spill response and cleanup) plan to be approved by the Executive Officer. The site contingency (spill response and cleanup) plan shall specify a more frequent

groundwater sampling and analysis schedule (at a minimum, once per month) when the results of the groundwater monitoring conducted pursuant to M&RP No. R8-2004-0063, B.1 indicate that the underlying groundwater has been impacted by releases from the operation of the facility (i.e., that the average monthly concentrations of one or more of the constituents listed in Provisions B.4. have been exceeded). In addition, the plan shall specify additional site assessment, groundwater monitoring and remedial actions to mitigate the discharges dependent upon the nature and magnitude of the discharge.

16. The discharger shall allow the Regional Board and other authorized representatives:

    a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the requirements of this Order;

    b. Access to copy any records that are kept under the requirements of this Order;

    c. To inspect the facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

    d. To photograph, sample and monitor for the purpose of assuring compliance with this Order.

17. The discharger shall report any discharge of waste that may endanger health or the environment. Any information shall be provided to the Executive Officer (951-782-4130) and the Office of Emergency Services (800-852-7550), if appropriate, as soon as the discharger becomes aware of the circumstances. A written report shall be submitted within five (5) days and shall contain a description of the discharge and its cause, the period of discharge, including exact dates and times and, if the discharge has not been corrected, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the discharge.

18. The California Water Code provides that any person who violates a waste discharge requirement or a provision of the California Water Code is subject to civil penalties of up to $5,000 per day, $10,000 per day, or $25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to $10 per gallon per day, or $20 per gallon per day of violation; or some combination thereof, depending on the violation, or upon the combination of violations.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on August 13, 2004.

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Gerard J. Thibeault
Executive Officer

California Regional Water Quality Control Board
Santa Ana Region

Monitoring and Reporting Program No. R8-2002-0033

Waste Discharge Requirements for Potential Releases of Petroleum Fuel Products from Operating Underground Storage Tanks near SAWPA Arlington Desalter Extraction Well Field
Lillo Service Station
Riverside, Riverside County
Santa Ana Region

A. MONITORING REQUIREMENTS

1. All analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services or at laboratories approved by the Executive Officer of the Regional Board.

2. All sampling and sample preservation shall be in accordance with the current edition of "*Standard Methods for the Examination of Water and Wastewater*" (American Public Health Association).

3. All laboratory analyses shall be performed in accordance with test procedures under 40 CFR 136 (revised as of May 14, 1999) "Guidelines Establishing Test Procedures for the Analysis of Pollutants," promulgated by the United States Environmental Protection Agency (EPA), unless otherwise specified in this monitoring and reporting program (M&RP). In addition, the Regional Board, at their discretion, may specify test methods that are more sensitive than those specified in 40 CFR 136. Unless otherwise specified herein, organic pollutants shall be analyzed using EPA method 8260, as appropriate.

4. All analytical data shall be reported with method detection limits (MDLs)[1], and with identification of either minimum level (ML)[2] practical quantitation levels (PQLs)[3] or limits of quantitation (LOQs).

5. Laboratory data must quantify each constituent down to the Practical Quantitation Levels specified in Attachment "A." Any internal quality control data associated with the sample must be reported when requested by the Executive Officer. The Regional Board will reject the quantified laboratory data if quality control data is unavailable or unacceptable.

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1 *MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 CFR 136, Appendix B, revised as of May 14, 1999.*

2 *Minimum level is the concentration at which the entire analytical system must give a recognizable signal and acceptable point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.*

3 *PQL is the lowest concentration of a substance which can be determined within ± 20 percent of the true concentration by 75 percent of the analytical laboratories tested in a performance evaluation study. Alternatively, if performance data are not available, the PQL is the method detection limit (MDL) x 5 for carcinogens and MDL x 10 for noncarcinogens.*

6. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Groundwater samples shall be collected from each monitoring well using standard groundwater sampling methodologies and protocols.

7. Whenever the discharger monitors any pollutant more frequently than is required by this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the discharge monitoring report specified by the Executive Officer.

8. The discharger may request a reduction in the constituents to be monitored and/or a reduction in monitoring frequency for a specific constituent(s) subject to the approval of the Executive Officer.

9. The discharger shall monitor those constituents that are detected at levels of concern[4] in the required volatile organic pollutant scan using EPA Method 8260.

10. The discharger shall assure that records of all monitoring information are maintained and accessible for a period of at least five years from the date of the sample, report, or application. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or by the request of the Board at any time. Records of monitoring information shall include:

    a. The date, exact place, and time of sampling or measurements;

    b. The individual(s) who performed the sampling, and/or measurements;

    c. The date(s) analyses were performed;

    d. The individual(s) who performed the analyses;

    e. The analytical techniques or methods used;

    f. All sampling and analytical results;

    g. All monitoring equipment calibration and maintenance records;

    h. All data used to complete the application for this Order; and,

    i. Copies of all reports required by this Order.

11. Discharge monitoring data shall be submitted in a format acceptable to the Regional Board. Specific reporting format may include preprinted forms and/or electronic media. The results of all monitoring required by this Order shall be reported to the Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order.

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[4] *Levels of concern are detected values at/or greater than the California Department of Health Services MCL and action level values.*

12. The discharger shall deliver a copy of each monitoring report in the appropriate format to:

California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501-3348

13. A "grab" sample is defined as any individual sample collected in less than 15 minutes.

14. Daily samples shall be collected on each day of the week.

15. Weekly samples shall be collected on a representative day of each week.

16. Monthly samples shall be collected on a representative day of the month.

B. GROUNDWATER MONITORING

1. A groundwater monitoring well network shall be established to adequately monitor any potential impact to the underlying groundwater from releases of petroleum fuel hydrocarbons from the underground storage tank and dispenser system. The groundwater monitoring wells shall be located and constructed so that representative samples of the discharge to groundwater can be obtained. The following shall constitute the groundwater monitoring program:

Constituent	Type of Sample	Units	Minimum Frequency of Sampling
Total Petroleum Hydrocarbons	Grab	µg/l	Monthly
Benzene	Grab	µg/l	Monthly
Toluene	Grab	µg/l	Monthly
Ethylbenzene	Grab	µg/l	Monthly
Xylene	Grab	µg/l	Monthly
Methyl tertiary butyl ether (MTBE)	Grab	µg/l	Monthly
Tert butyl alcohol (TBA)	Grab	µg/l	Monthly
Other fuel oxygenates	Grab	ug/l	Monthly
Ethanol	Grab	µg/l	Monthly

2. A more frequent groundwater sampling schedule shall be implemented, as specified in the site contingency plan, upon the finding of any discharge that is violation of the discharge specifications.

C. REPORTING:

1. The results of the above analyses shall be reported to the Regional Board within 24 hours of finding any discharge that is in violation of the discharge specifications.

2. Monitoring reports shall be submitted by the 30th day of each month and shall include:

   a. The results of all chemical analyses for the previous month, and annual samples whenever applicable,

   b. A summary of the month's activities.

3. All analytical data shall be arranged in a tabular format to clearly show compliance or noncompliance with each discharge specification.

4. For every item where the requirements are not met, the discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time and submit a timetable for correction.

5. Upon completion of the project, the discharger shall notify the Executive Officer of the Regional Board in writing about cessation of the discharge and request for a rescission of this Order.

All reports shall be signed by a responsible officer or duly authorized representative of the discharger and shall be submitted under penalty of perjury.

Ordered by_____

Gerard J. Thibeault
Executive Officer

August 13, 2004

City of Riverside Planning Department - Ken Gutierrez
Western Municipal Water District - Brenda Meyer
California Department of Health Services - Cor Shaffer
Office of State Senator James Brulte – Kathy Hilke
Shell Products Company - Randy Orlowski
Miller Brooks Environmental - Ian Jones
Atlantic Richfield Company – Gordon Terhune
Delta Environmental – Dennis Rourke
Mobil Business Resources – John Medrano
Kleinfelder – Michael Kesler
California Department of Health Services, San Diego - Steve Williams
County of Riverside Environmental Health Department - Sam Martinez
County of Riverside Environmental Health Department – Sharon Boltinghouse
Lillo service station - Elias Atallah

Attachment A
Minimum Level/Reporting Level

Constituent	Minimum Level/Reporting Level (ug/l)
Total Petroleum Hydrocarbons	50
Benzene	0.5
Toluene	5
Ethylbenzene	5
Xylene	5
Methyl Tertiary Butyl Ether (MTBE)	5
Tert Butyl Alcohol (TBA)	10